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10/594,733

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Hiroshi Shibaoka

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EXAMINER

STEELE, JENNIFER A

ART UNIT

PAPER NUMBER

1798

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/594,733

Applicant(s)

SHIBAOKA ET AL.

Examiner

JENNIFER STEELE

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 September 2011.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on ____; the restriction requirement and election have been incorporated into this action.
- 4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 5) ☒ Claim(s) 1-3 and 14 is/are pending in the application.
- 5a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 6) ☐ Claim(s) ____ is/are allowed.
- 7) ☒ Claim(s) 1-3 and 14 is/are rejected.
- 8) ☐ Claim(s) ____ is/are objected to.
- 9) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 10) ☐ The specification is objected to by the Examiner.
- 11) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 12) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

Specification

1. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: Claim 1 recites the limitation in line 15 “wherein the A yarn-to-B yarn pitches are not longer than 7 mm. It is not clear from the claim or the specification what the term “pitches” means. There are no figures or weave diagrams to describe the weave which would indicate what the term pitch means. The claim requires an A yarn and a B yarn and wherein the constitution ratio B yarn/A yarn is 1/4 to 1/20 so it is clear that there are two different yarns. Pitch is defined in the Textile Glossary as the average number of pile ends per inch in the fillingwise direction. The application is not directed to pile fabric. For purposes of examination, the claim limitation is considered to refer to the distance between B yarns. For example, there are 4 to 20 A yarns and then 1 B yarn and the distance between the B yarns is not longer than 7 mm.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claim 14 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in

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the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 14 claims an “air permeability imparting”. The specification does not teach an air permeability imparting step or treatment.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 14 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 14 claims an “air permeability imparting”. It is not clear from the claim or the specification what type of treatment this step is.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. Claims 1-3, 6, 7, 10, 12, 13 and 14 rejected under 35 U.S.C. 103(a) as being unpatentable over Onodera (JP 2003-138446 machine translated) in view of Akamatsu et al (US 5,273,813).

Claim 1 describes A bag made of a downproof fabric comprising a polyester fabric having, said fabric consisting essentially of:

- a total cover factor of not lower than 1600 and
- a mass per unit area of not higher than 45 gsm
- the fabric being heat treated by calendaring,
- wherein said polyester fabric is composed of
 - polyester multifilament A yarns having a total fineness of not higher than 25 dtex and a single yarn fineness of not higher than 2.0 dtex and
 - multifilament B yarns having a total fineness of not lower than 35 dtex
- wherein the arrangements of the respective yarns in the warp and weft directions are such that the yarn constitution ratio "B yarn/A yarn" is $\frac{1}{4}$ to $\frac{1}{20}$ (number of yarns to number of yarns ratio) and
- wherein the A yarn to B yarn pitches are not longer than 7 mm.

Onodera is directed to a high density thin woven fabric (Title). Onodera teaches a woven fabric that is made from polyester multifilaments having a single filament fineness of less than 0.8 dtex and polynosic of lyocell spun yarns having single filament

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fineness of less than 1.4 dtex. The fabric is down-free (ABST). Onodera teaches the cloth is for down proofs used for outerwear or a bedding side fabric and the fabric prevents blow off of down and has a soft hand [0002]-[0004]. The fabric has low permeability of less than 3 cc/cm²/sec after one wash and has a cover factor of 2350-2600 [0006]. Onodera teaches the low permeability prevents down blow off [0020]. Onodera teaches the fabric is calendered [0015]. Onodera teaches the fabric is formed into a bag which does not require an inside bag [0022].

Onodera teaches two different yarns, one of multifilament polyester and the other of polynosic or lyocell spun yarns. The multifilament polyester has a single filament fineness of less than 1.4 dtex and in the claimed range. The polyester yarns differ and are not less than 25 dtex and the yarn sized is expressed at 78T expresses 216f (=0.36 dtex/f). The regenerated cellulose (lyocell) yarns are expressed as cotton count yarn number of 55 and 50 [0007] which would be about 100 dtex and in the claimed range of greater than 35 dtex.

Onodera teaches 43-63% of regenerated cellulose yarn with the balance being polyester yarn. The regenerated cellulose yarn is equated with the B yarn. Onodera differs and does not teach a B yarn that is present in a constitution ratio of 1/4 to 1/20 (20% to 5%).

Onodera differs and does not teach the pattern of yarn A and B meets the constitution ratio or the pitches per 7 mm.

Onodera teaches the light weight fabric is less than 130 gsm, less than 104 gsm [0011] and differs and does not teach a 45 gsm fabric.

Akamatsu is directed to a fabric material that has high resistance to tearing and is useful for sporting goods utilizing wind pressure, for example, yacht sails, paragliders and hanggliders. Akamatsu teaches a low air permeability fabric. Akamatsu teaches a woven fabric of polyester fibers wherein the basis weight is 20-100 gsm (ABST).

Akamatsu teaches the polyester fibers have an individual fineness of 1.5 to 3.0 deniers, which is equivalent to 1.65 to 3.3 dtex. A dtex of 1.65 is within the claimed range of less than 2.0 dtex. Akamatsu teaches a multifilament polyester yarn is made from the fine fibers. Akamatsu teaches the multifilament polyester yarn can be 20 denier (col. 12, lines 40), which is equivalent to 22 dtex and in the claimed range of less than 25 dtex.

Akamatsu teaches the polyester fabric is woven in a structure (col. 11 and 12) of warp and weft yarns densities of 150 yarns/ 25.4 mm with a 20 denier multifilament yarn. The weaving structure has 20 polyester multifilament yarns having a denier of 20 (referred to as thin yarns) / a thick yarn which is composed of doubled three 20, 40 or 75 denier yarns / 2 thin yarns / 1 thick yarn. The thin yarn is equated with the claimed multifilament A yarn of less than 25 dtex. The thick yarn has a fineness of three 20 denier yarns which is a total denier of 60 denier or 67 dtex. The thick yarn is equated with the claimed multifilament B yarn of fineness not lower than 35 dtex.

Akamatsu's weaving pattern has 2 thick yarns for every 22 thin yarns which within the claimed ratio of 1-B yarn to 4-A yarns and 1-B yarn to 20-A yarns. Akamatsu teaches there are 150-20 denier yarns per 25.4 mm. For the pattern of 20 thin yarns to 1 thick yarn, 20 thin yarns would occupy a width of 3.4 mm ($20/150 * 25.4$

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mm). Therefore there would be a B yarn or thick yarn, every 3.4 mm and this structure is in the claimed range where the A yarn to B yarn pitches are less than 7 mm.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to optimize the yarn size and weight motivated to produce a light weight, low permeability downproof fabric. It further would have been obvious to one of ordinary skill in the art arrange the finer and heavier yarns such that the heavier yarns are less than every 7 mm motivated to improve the tear strength of the fabric provided by the heavier weight yarns, yet maintain the higher cover factor and low permeability provided by the lighter weight yarns.

As to claim 2, Onodera does not teach paralleled yarns B. Akamatsu teaches the B yarns are doubled A yarns (col. 8, lines 60-64). As Applicant defines parallel yarns as double, triple or quadruple yarns [0028]. The doubled A yarns are equated with paralleled B yarns claimed.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to employ a paralleled yarn motivated to increase the size and strength of the yarn and improve the strength of the fabric.

As to claims 3 and 7, Onodera teaches the permeability is less than 3 cc/cm²/sec and differs and does not teach the tear strength. Akamatsu teaches the properties of higher tear strength and lower air permeability is desirable. Akamatsu presents tear strength and air permeability values for the woven fabric in Table 4. Examples 21 and 22 employ the same yarn size and pattern as claimed. The tear strengths of Examples 21 and 22 are 1.72 and 2.00 kg which is equivalent to 17-19 N and in the claimed range

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of not lower than 7 N. The air permeability is 0.25 to 0.3 ml/cm²/sec which are in the claimed range of not higher than 1.2 ml/cm²/sec.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to employ the fabric weave of Akamatsu motivated to produce a low permeability, low weight fabric that has high tear strength for a downproof fabric.

As to claims 6 and 10, Onodera teaches a fabric formed into a bag where down is filled into the bag. The down is inherently a warmth retaining mass as it is used for outerwear and bedding.

As to claim 12, Onodera teaches the fabric is calendered and Onodera teaches a low permeability fabric and therefore it is presumed that the calendaring treatment of Onodera inherently fills the interstitial spaces in the fabric.

As to claim 13, Onodera teaches a soft fabric, however Onodera does not measure the softness as claimed. It would have been obvious to one of ordinary skill in the art at the time the invention was made to measure the softness motivated to produce a soft fabric.

As to claim 14, Onodera teaches other treatments such as scouring and dyeing [0017].

5. Claim 11 rejected under 35 U.S.C. 103(a) as being unpatentable over Onodera (JP 2003-138446 machine translated) in view of Akamatsu et al (US 5,273,813) and in further view of Hirakawa et al (US 4,582,747).

Onodera in view of Akamatsu differ and do not teach the thickness of the fabric.

Hirakawa teaches the fabric has a thickness of 0.05 mm to 0.4 mm. If the thickness is smaller than 0.05 mm, the fabric is too thin and has a tendency to tear (col. 5, lines 28-35). The fabric is in the form of a woven fabric selected from weaves of plain, twill and satin weaves (col. 5, lines 57-66). The air permeability of the fabric is about 0.2 to about 0.3 cc/cm²/sec (col. 8, lines 55-59). As the fabric is dust proof, it is presumed that the fabric would also be down proof.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to produce a fabric with the claimed thickness motivated to produce a strong, yet down proof fabric.

6. Claims 1-3, 6, 7 and 10-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith III et al (US 6,277,770) in view of Hirakawa et al (US 4,582,747). Smith III is directed to a durable, comfortable, air permeable allergen-barrier fabric (Title). The allergen barrier fabric includes a tightly-constructed fabric substrate. The invention relates to tightly constructed, non-coated, non-laminated fabric and is woven from continuous natural or synthetic filament. The allergen barrier cover material can take on any suitable form for example a pillow ticking, a pillow cover, a mattress ticking, a mattress cover a duet cover or a bedspread (col. 44-62). The fabrics are useful for products such as down-filled bedding (col. 4, lines 56-67). The fabrics are made from spun polyester and filament polyester. The fabric is subjected to finishing processes include scouring, heat setting, width/length fabric shrinkage and mechanical manipulation to further compact yarn to yarn spacing. Mechanical manipulation can

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involved calendaring wherein the yarns are flattened via heat and pressure to further close fabric pores. No further coatings or lamination is required (col. 5, lines 23-46).

The fabrics are produced to have a maximum pore size of 4 to 10 microns. Example 1 employs 70 denier, 34 filament polyester yarns, woven in a plain weave construction (col. 7, lines 29-38).

Smith III differs and does not teach the fineness of the filaments and does not teach a yarn of less than 25 dtex.

Smith III differs and does not teach an A and a B yarn in the claimed ratio.

Smith III differs and does not calculate the cover factor.

Smith III differs and does not teach a basis weight not higher than 45 gsm.

Hirakawa et al is directed to a dust-proof fabric with dust-collecting efficiency and dust-preventing property. The fabric includes filament yarns having a thickness of 20-400 denier and the individual filaments are preferably 1.5 denier or less. The filaments can be polyester (col. 4, lines 23-41). The denier of the warps and weft should be in the range of 20 to 400. When the warp or wefts are greater than 400, the resultant fabric becomes excessively thick and the touch of the fabric is degraded and the clearance between the warps and wefts is increased and the filtering property of the fabric is reduced. When the denier of the warps or wefts is smaller than 20, the resultant fabric is too thin and therefore the strength or durability of the fabric is unsatisfactory (col. 5, lines 15-26). In order to reduce permeation of dust the size of the pores must be decreased. The pore size is influenced by the interfilament bundle pores, densities of the yarns, the presence of absence of a calender treatment, the form of the yarn used,

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flat or textured. A calender treatment exerts an effect to crush the pores. A calender treatment is an effective method of reducing the volume of the inter-filament bundle pores in a fabric imparting low air permeability (col. 7, lines 1-25). Hirakawa further teaches the cover factor is a two-dimensional porosity. Hirakawa is relating the porosity to cover factor. However, Hirakawa teaches the porosity desired is a three-dimensional porosity and it is difficult to represent the porosity of the factor by cover factor.

Hirakawa also teaches a B yarn such as an electrically conductive multifilament yarn that is arranged at intervals of 3 mm to 50 mm. The B multifilament yarns have a diameter of less than 100 micron more preferably less than 60 micron (col. 9, lines 14-46). In example 1, the additional yarn is a doubled polyethylene terephthalate multifilament yarn and an electrically conductive yarn having 20 denier and this yarn is placed in the weave at intervals of 0.6 cm (6 mm). As the polyethylene terephthalate multifilament yarn can have a denier of 20-400, at a minimum, the denier is 20 and combined with a 20 denier conductive yarn, the B yarn is 40 denier, or 44 dtex and in the claimed range of greater than 35 dtex. While Hirakawa differs and does not teach the ratio of the multifilament polyester yarn (A yarn) to the conductive yarn (B yarn), as Hirakawa teaches the (B) yarns are placed in the weave in the same length interval, it is reasonable to presume the ratio of A to B yarns is within the claimed range. It would have been obvious to one of ordinary skill in the art at the time the invention was made to place a larger yarns at least every 7 mm motivated to improve the strength of the fabric.

Hirakawa teaches the thickness of the fabric is preferably in the range of from 0.05 mm to 0.40 mm. Hirakawa differs and does not refer to a basis weight, however one of ordinary skill in the art would know that the thickness and basis weight are related measures and dependent on the density of the fabric. As Hirakawa teaches the thickness in the same range as Applicant, it is reasonable to presume that the basis weight is also in the claimed range.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to optimize the optimize the denier of the multifilaments motivated to produce a fabric with a low pore size which is also low basis weight and can filter dust or down filling. It further would have been obvious to employ a doubled yarn in intervals motivated to improve the strength and properties of the fabric. While the claimed cover factor is not taught by the combination of SmithIII and Hirakawa, it is reasonable to presume that the combination inherently possesses the claimed cover factor as Hirakawa teaches the pore size is related to the cover factor and as the fabric of Hirakawa is dust proof and dust is generally smaller is size than down, the fabric of Hirakawa would be also be downproof.

As to claim 2, Smith III differs and does not teach a paralleled yarn. Hirakawa teaches a polyester multifilament yarn doubled with an electrically conductive yarn. Applicant refers to parallel yarns as double yarns in the specification, page 6. It would have been obvious to employ a parallel yarn motivated to increase the yarn size and strength of the fabric.

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As to claim 3 and 7, Smith III differs and does not teach the strength or permeability of the fabric. Hirakawa teaches the permeability is 0.3-10 ml/cm²/sec and in the claimed range. As the combination of Smith III and Hirakawa teaches the same structure and materials as claimed, it is reasonable to presume that the tear strength is inherent or obvious over the combination.

As to claims 6 and 10, Smith III teaches tightly constructed, non-coated, non-laminated fabric and is woven from continuous natural or synthetic filament. The allergen barrier cover material can take on any suitable form for example a pillow ticking, a pillow cover, a mattress ticking, a mattress cover a duet cover or a bedspread (col. 44-62). The fabrics are useful for products such as down-filled bedding (col. 4, lines 56-67). A pillow cover or a bedding or duvet cover is in the form of a bag and it contains down-filling which is equated with a warmth retaining mass.

As to claim 11, Smith III differs and does not teach the fabric thickness. Hirakawa teaches the fabric has a thickness of 0.05 mm to 0.4 mm. If the thickness is smaller than 0.05 mm, the fabric is too thin and has a tendency to tear (col. 5, lines 28-35). The fabric is in the form of a woven fabric selected from weaves of plain, twill and satin weaves (col. 5, lines 57-66). The air permeability of the fabric is about 0.2 to about 0.3 cc/cm²/sec (col. 8, lines 55-59). As the fabric is dust proof, it is presumed that the fabric would also be down proof.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to produce a fabric with the claimed thickness motivated to produce a strong, yet down proof fabric.

As to claim 12, Smith III teaches calendaring the fabric as mechanical manipulation can involved calendaring wherein the yarns are flattened via heat and pressure to further close fabric pores (col. 5, lines 23-46).

As to claim 13, Smith III in view of Hirakawa differ and do not measure the softness of the fabric. Hirakawa teaches the small denier of the individual filaments of 1.5 or less is effective for creating a soft touch of the resultant fabric. Hirakawa also teaches the fabric is subjected to a cam-fit processing to soften the touch of the woven fabric and is comfortable and has a soft touch. While Hirakawa differs and does not measure the softness as claimed, it is reasonable to presume that as the structure and materials are the same as claimed, the softness of the combination of Hollander, Akamatsu and Hirakawa would inherently possess the softness. It would have been obvious to one of ordinary skill in the art at the time the invention was made to employ softness treatments motivated to produce a soft and comfortable fabric for down bags.

As to claim 14, Smith III teaches the fabric is subjected to finishing processes include scouring, heat setting, width/length fabric shrinkage and mechanical manipulation to further compact yarn to yarn spacing.

Response to Arguments

7. Applicant's arguments, with respect to the 35 USC rejection over Akamatsu in view of Vogt have been fully considered and are persuasive. The 35 USC 103 rejection over Akamatsu in view of Vogt of 1-3, 7, 12 and 13 has been withdrawn. Applicant's arguments that one of ordinary skill in the art would not have combined Akamatsu with

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Vogt because a person of ordinary skill in the art, seeking to improve the air and wind impermeability and tearing resistance properties of the Akamatsu fabric would not look to Vogt that concerns down proofing of fabrics by metallizing a surface of a fabric.

Applicant's arguments are persuasive. A new grounds of rejection is presented in this office action and as a result the office action is being made nonfinal.

8. Applicant argues that the cover factor calculated from Akamatsu is incorrect as it is incorrectly based on a doubled yarn being double three 20 denier yarns. While a doubled yarn can refer to the type of twist or method of combining the three 20 denier yarns and does not necessarily mean that the yarn is made from two (double) - three 20 denier yarns. So the cover factor would be 1528 and not 1680 and less than the claimed range. However, cover factor is a calculated property and easily optimized by one of ordinary skill in the art by employing a greater number of finer yarns.

9. While the combination of Akamatsu and Vogt is not proper, the reference to Akamatsu is still considered to be relevant as Akamatsu is directed to a windproof fabric with low permeability. The new grounds of rejection employs down fabric and low dust permeable fabrics where low air permeability is desired. One of ordinary skill in the art would have looked to Akamatsu for a low air permeable fabric that is lightweight and strong. MPEP 2141.01(a) states that "Under the correct analysis, any need or problem known in the field of endeavor at the time of the invention and addressed by the patent [or application at issue] can provide a reason for combining the elements in the manner claimed." KSR International Co. v. Teleflex Inc., 550 U.S. ___, ___, 82 USPQ2d 1385, 1397 (2007). Thus a reference in a field different from that of applicant's endeavor may

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be reasonably pertinent if it is one which, because of the matter with which it deals, logically would have commended itself to an inventor's attention in considering his or her invention as a whole.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JENNIFER STEELE whose telephone number is (571)272-7115. The examiner can normally be reached on Office Hours Mon-Fri 8AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Angela Ortiz can be reached on (571) 272-1206. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jennifer Steele/

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